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December 4, 2002

Marlene Dortch, Secretary
Federal Communications Commission
The Portals
445 Twelfth Street, S.W.
12th Street Lobby, TW-A325
Washington, DC 20554

Dear Ms. Dortch:

Re: Ex Parte Presentation in the Matter of Review of the Commission's Rules And Policies Affecting the Conversion to Digital Television (MM Docket No. 00-39)

Today, on behalf of ATI Technologies, Inc., the attached information was conveyed to Rick Chessen, Associate Bureau Chief, Media Bureau, and Bruce Franca, Deputy Chief, Office of Engineering and Technology. The information relates to the Commission's implementation of its DTV tuner/decoder mandate, as adopted on August 8, 2002, in the above-referenced proceeding.

In accordance with Section 1.1206 of the Commission's rules, 47 C.F.R. §1.1206, an original and one copy of this letter is being filed with your office with copies to Messrs. Chessen and Franca.

If there are any questions concerning this matter, please contact the undersigned.

Respectfully submitted,

Matthew D. Miller, Ph. D.
Consultant to ATI Technologies, Inc.

Enclosure

cc: Rick Chessen
Bruce Franca

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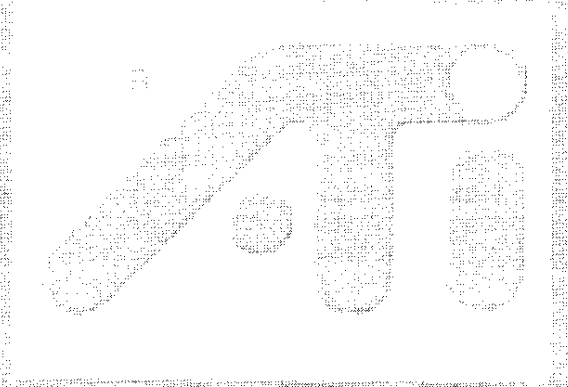


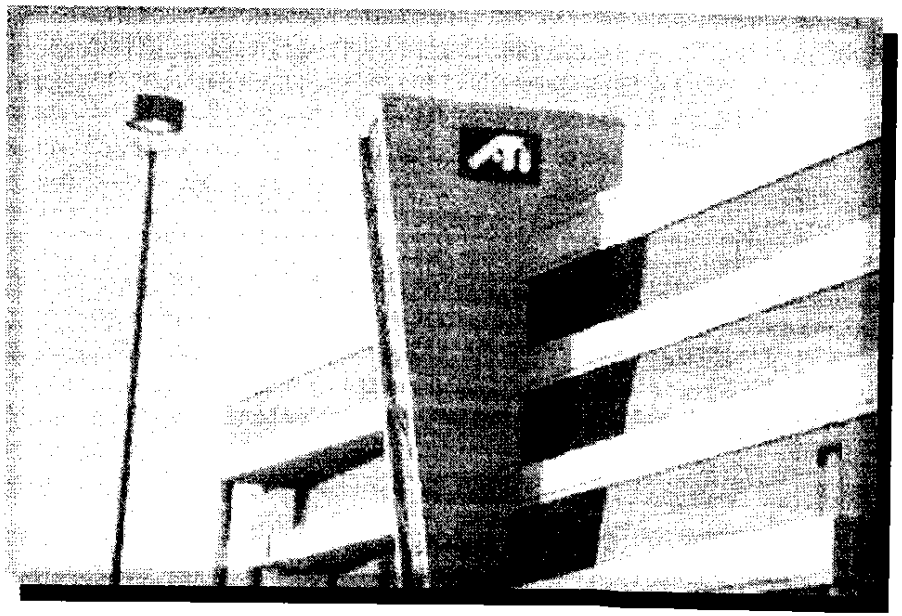
Current and Future Costs of ATSC Reception

December 4, 2002

Matt Miller, Ph. D., Consultant to ATI Technologies

ATI Company Background

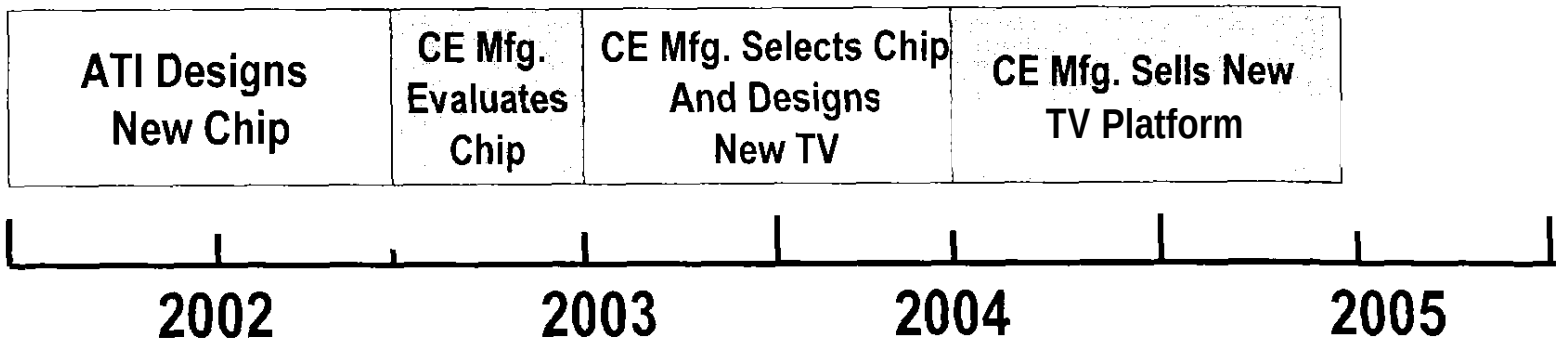
- Founded in 1985 (pioneered graphics industry)
- Based in Toronto, Canada. Offices in 14 countries
- Nasdaq and Toronto Stock Exchange (TSE)
- $1.04B (US) in Revenue
- $160M (US) in R&D
- 1,900 employees
- 900 engineers (300 in USA)



ATI's Interests and Qualifications Regarding DTV

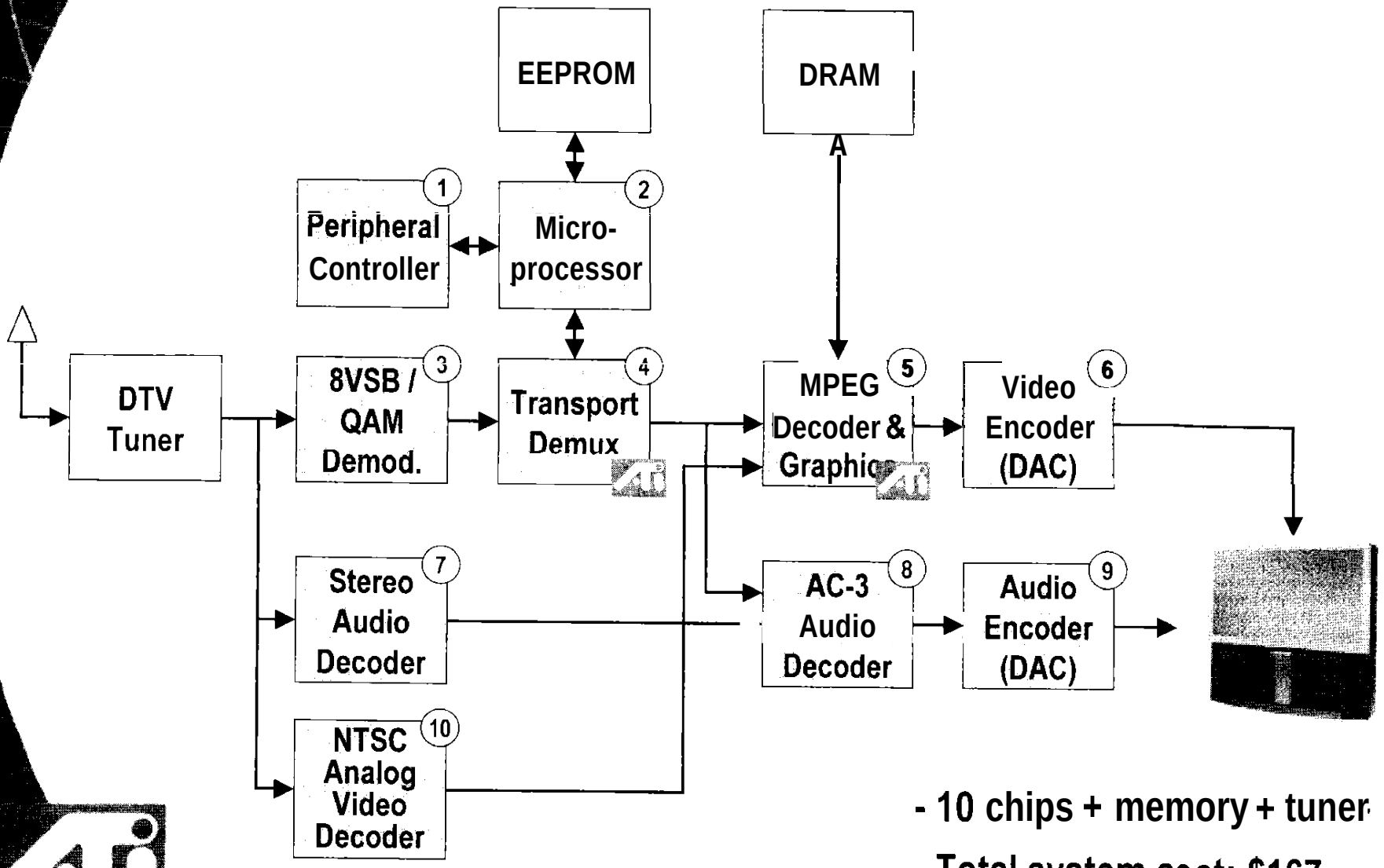
- Experienced supplier of PC video and graphics chips in high volumes with 30% of PC desktop and 60% of PC laptop market share
- Leader in HD MPEG-2 technology providing chips to several tier-one TV manufacturers developing ATSC tuners for '03 production
- Acquired NxtWave Communications (June, 2002) – leader in VSB, QAM, and Open Cable technologies
- Matt Miller, Ph.D., former CEO of NxtWave, continues as consultant and advisor to ATI on DTV matters

ATI Understands the Cost of ATSC Reception



- Today ATI is designing the components to be used in '04 DTVs
- ATI makes most of the non-commodity components used in an ATSC receiver and builds complete reference designs
- We have the complete picture and can accurately predict cost of ATSC reception for '03 and '04 TVs
- Cost will come down 30% to 40% per year for the next 3-5 years

ATSC Receiver – CY 2001/2002



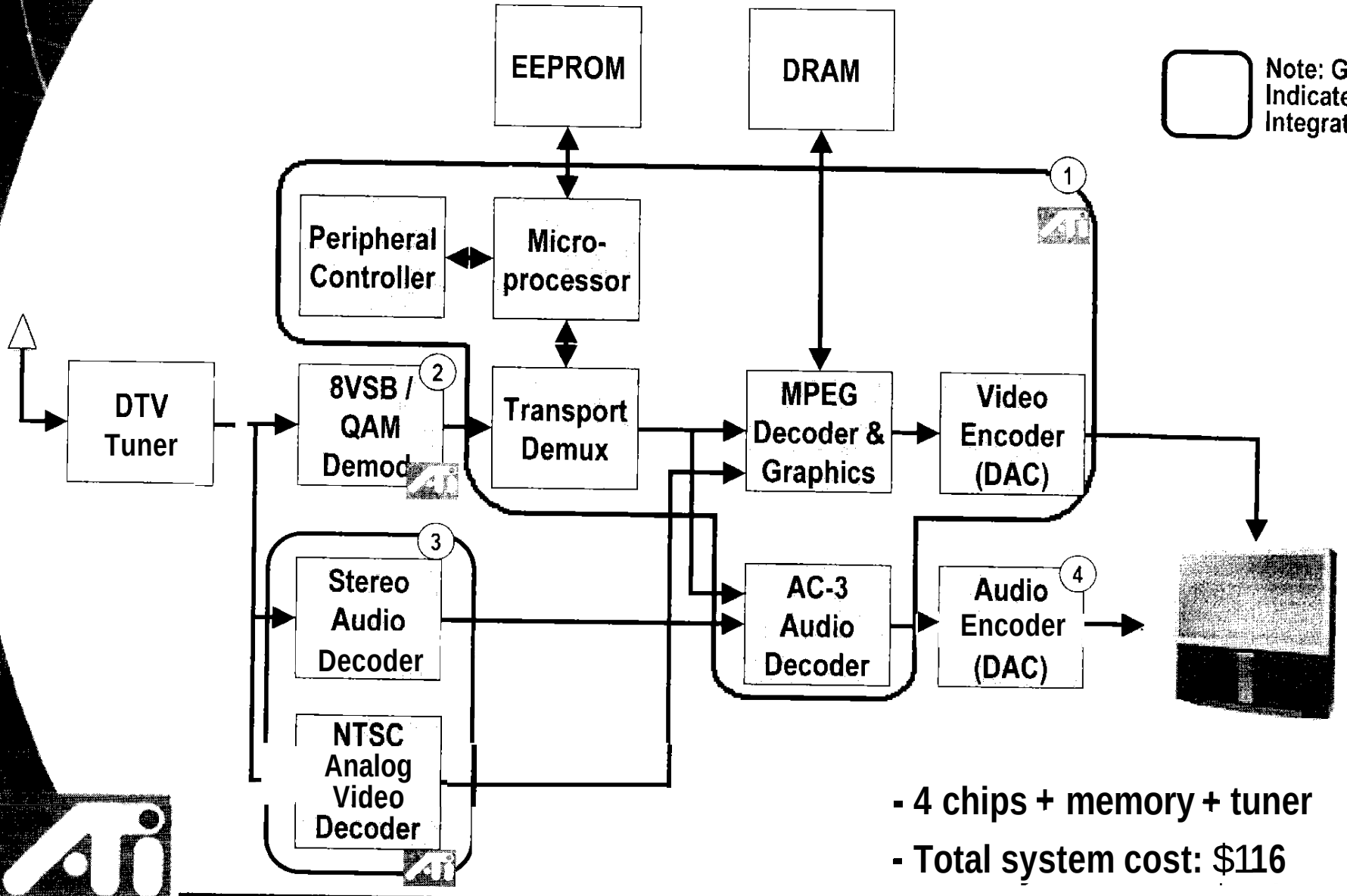
- 10 chips + memory + tuner
- Total system cost: $167

ATSC Receiver – CY 2001 / 2002*

#	Description	Cost($)
1	Peripheral Controller	5
2	Microprocessor	8
3	VSB Demod	15
4	Transport Demux / CPU Bridge	12
5	MPEG Decoder + Graphics	20
6	NTSC Video Encoder	5
7	Stereo Audio Decoder	4
8	AC-3 Audio Decoder	8
9	Audio Encoder (DAC)	2
10	NTSC Video Decoder	5
	DTV Tuner	18
	EEPROM (8MB)	14
	DRAM (32MB)	10
	PCB	12
	Passives (15%)	21
	Manufacturing (5%)	8
	TOTAL	**167**

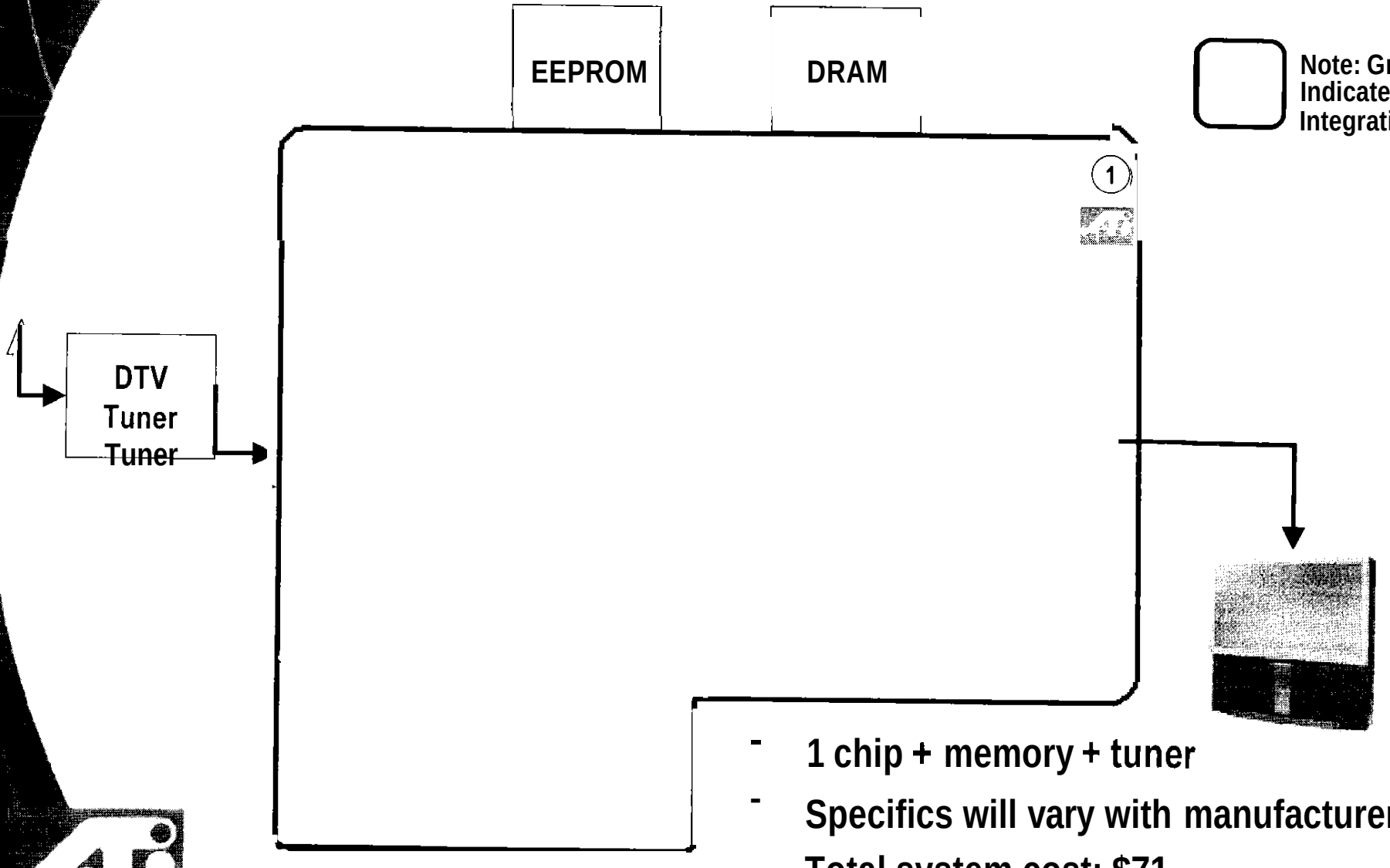
***Assumes integrated into a TV so no packaging or power supply costs**

ATSC Receiver – CY 2003



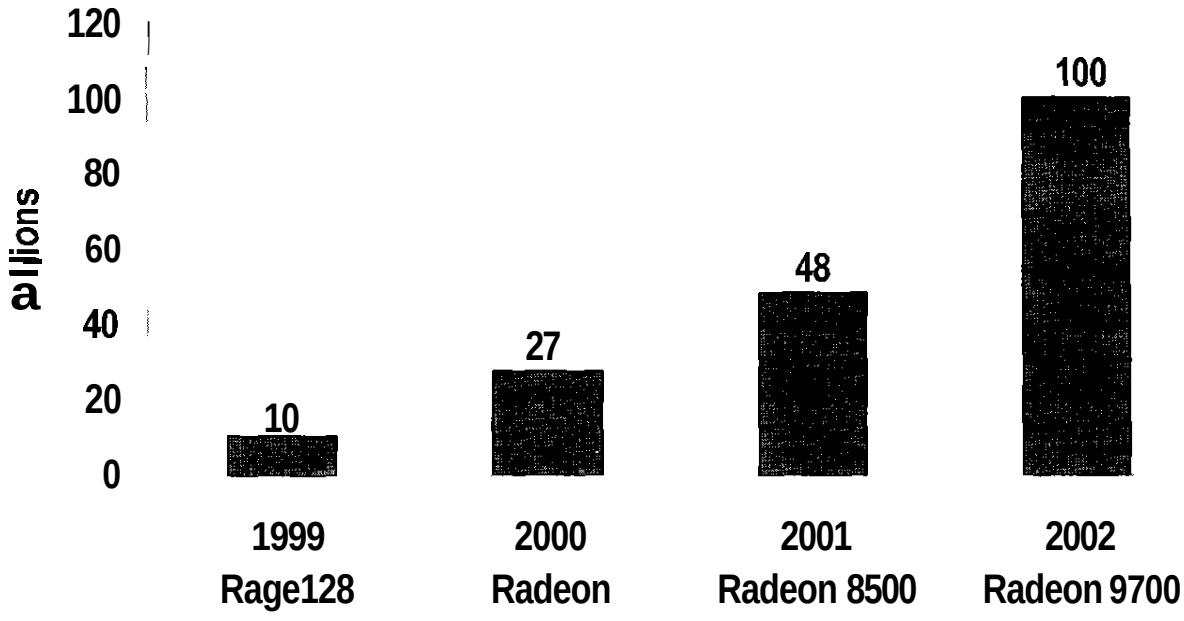
- 4 chips + memory + tuner
- Total system cost: $116

ATSC Receiver – CY2004



- 1 chip + memory + tuner
- Specifics will vary with manufacturer
- Total system cost: $71

Moore's* Law

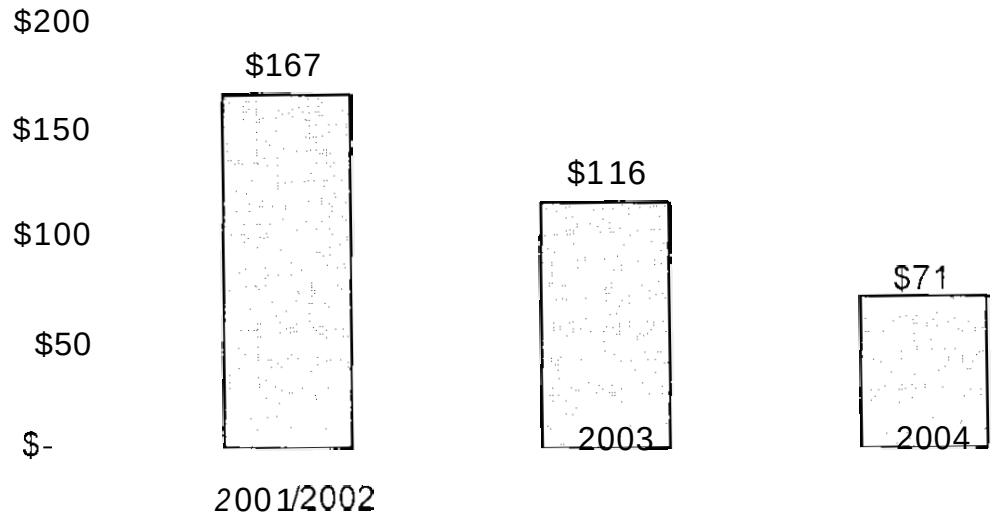


- Moore's Law Says that... every two years the number of transistors on a chip doubles, for the same price
- The law applies equally to Intel microprocessors and ATSC tuners
- This leads to roughly 40% annual reduction in chip area for a given function, hence 30% to 40% cost reduction

***Gordon Moore, co-founder of Intel**

ATSC Tuners Follow Normal Industry Cost Curves

Incremental Cost of Integrating an ATSC Tuner into a TV



- Costs of finished product includes all semiconductors, manufacturing, tc.
- 57% reduction in cost over 2-3 years
- Mandatory reception rules will cause free market forces to make ATSC chips very cheap, very quickly

  [DVD players introduced at $600 to $1000 now sell for $79 at Best Buy]

Cable Reception

- 65% of US homes have cable – solving the cable DTV tuner issue for consumers & CE manufacturers is essential
- Technology today allows free cable DTV channels to be received by an ATSC tuner for no additional cost to the tuner
  - Most VSB demodulators have “clear QAM” support
- Hardware technology for receiving encrypted cable DTV channels is also available
  - Apart from cost of conditional access card, less than $10 additional cost to tuner
  - But CE manufacturers need certainty of unidirectional DVS standard

Over the Air Reception and "Plug and Play"

- "Plug and play" is viewed as a desirable feature in a cable ready digital TV set
  - Allows reception of all un-encrypted digital channels without a set top box
  - Encrypted channels can be received with the addition of an MSO-supplied smart card
  - Promotes innovation and competition among manufacturers
  - Eliminates the need and cost of an external set top box
- The cost to add VSB reception to a plug and play digital TV is less than $5

Summary

- The cost of ATSC tuners has been overstated
  - Approximately $70 in 2004 for an integrated TV
  - ATSC tuners follow normal industry price curves of 30% - 40% cost reduction/year
- HD cable support is available now from chip vendors
  - Clear QAM supported now on unencrypted channels
  - CE manufacturers need certainty of DVS standards on encrypted channels
  - The cost to add "plug and play" to an ATSC DTV is less than $10
- The cost to add ATSC over-the-air-reception to a "plug and play" digital TV is less than $5
- Requiring ATSC tuners in TVs makes sense for the consumer
  - Consumer benefits of digital TV services and public interest in efficient use of spectrum have been well documented by others
  - Free market forces will help drive costs down very fast
  - No different from requiring UHF tuners 40 years ago